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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

February 13, 2001

VIA HAND DELIVERY

Ms. Magalie Roman Salas, Secretary
Federal Communications Commission
445 Twelfth Street
Washington, D.C. 20554

Re: EchoStar Satellite Corp. and DIRECTV, Inc.; File No. 0094-EX-ST-1999; ET Docket No. 98-206; DA 99-494; EX PARTE

Dear Ms. Salas:

Please see the attached correspondence, which should be entered in the above-referenced dockets.

Please do not hesitate to contact the undersigned should you have any questions.

Respectfully submitted,

Pantelis Michalopoulos
Rhonda Rivens Bolton
STEPTOE AND JOHNSON, LLP

Counsel for EchoStar Satellite Corp.

Gary M. Epstein
James H. Barker
LATHAM & WATKINS

Counsel for DIRECTV, Inc.

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February 13, 2001

The MITRE Corporation
Attention: Jim Chadwick, Mail Stop W300
1820 Dolley Madison Blvd.
McLean, VA 22102

Dear Mr. Chadwick:

Enclosed please find answers to the second set of questions posed by the MITRE Corporation to the DBS operators, DIRECTV, Inc. ("DIRECTV"), and EchoStar Satellite Corporation ("EchoStar").

Please contact either of the undersigned should you have any questions.

Very Truly Yours,

James H. Barker
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ADDITIONAL ANSWERS FROM THE DBS OPERATORS TO QUESTIONS POSED BY THE MITRE CORPORATION

1. *Do you believe that rain scatter is an important mechanism for causing interference from the MVDDS system into DBS receivers? If so, please provide a supporting analysis that quantifies the severity of the problem.*

In accounting for the effects of rain on a satellite link, both DIRECTV and EchoStar include the increase in signal attenuation and the increase in sky noise temperature due to rain. Neither DIRECTV nor EchoStar includes the effect of rain scatter.

2. *To determine the rain margin an important calculation is the decrease of the receive antenna G/T as a result of rain losses. In order to calculate G/T in rain we need some antenna parameters. Please describe your methodology for computing G/T and provide the LNB noise figure, feed loss, antenna efficiency loss, and other losses used for this calculation in your analyses of the DBS receive antenna.*

   G/T is calculated by subtracting the receive system noise temperature (dB) from the antenna gain (dB). Typical 45 cm receive antenna parameters are given below:

   - Gain: 33.6 to 34.0 dB
   - Efficiency: 70%
   - LNB Noise Figure: 1 dB or better
   - System noise temp.: 120 to 135°K

3. *What link reliability do you currently expect for DBS receivers? Identify several cities and provide reliability values. In your view, how much degradation to these values would be acceptable if MVDDS interference were present?*

As explained in answers to MITRE's first set of questions, DBS providers have moved toward higher availabilities with the buildout of digital satellite transmission systems, and continue to do so. This point was discussed in the joint "Rebuttal to Northpoint's Evaluation and Analysis of DBS-Terrestrial Compatibility Testing at Oxon Hill Maryland," filed by DIRECTV and EchoStar on September 20, 2000, at 2-3, as well as in DIRECTV's "Further Response to Northpoint Ex Parte Filings," at 6-10, also filed on September 20, 2000. Thus, for example, the availability planning parameter 99.7% as stated in the original analog FM-based BSS Plan is not suitable for use with digital systems because of the steep bit error rate characteristic of these digital systems. In order to have roughly the same quality viewing experience between analog FM and digital systems – *i.e.*, to roughly match the time over which a picture is viewable, digital systems must have threshold availability values much higher than an annual average of 99.7%. For these reasons, U.S. DBS operators and satellite communications design engineers around the world are striving to build and preserve very high availability values.

The expected reliability for DBS services is not a subjective judgment of DBS providers. First, it has already been considered and accepted by the International Telecommunication Union ("ITU") after being championed by the FCC and the United States: as shown in the DIRECTV "Further Response" submission cited, a typical link shown in newly-adopted ITU BSS planning parameters for Regions 1 and 3 has an annual availability value of 99.998%. Second, such availability responds to consumer preferences as witnessed, for example by Microsoft's recent "5 9s" advertisement. Third, DBS providers have invested hundreds of millions of dollars to achieve such high availability values.

Examples of current availability performance, which varies across the coverage area (but again, which DBS operators are striving to improve), can be seen both in the DBS link described in Appendix A of the January 27, 2000, DIRECTV report "Conclusions to Date Regarding Harmful Interference From a Proposed Northpoint Technology Terrestrial System Operating in the DBS Downlink Band, 12.2-12.7 GHz," and in Appendix B to the July 25, 2000, DIRECTV and EchoStar joint report on the Oxon Hill testing. These documents provide link budgets of DIRECTV service to Washington, DC.

The DBS providers' view of "acceptable degradation" is the standard accepted by the ITU: a *total* of 10% increase in unavailability based on the expected reliability values set forth above. In the DBS providers' view, if the interference into DBS from all sources, including Northpoint, exceeded that 10% unavailability increase, the DBS performance and reliability goals that are explicitly set forth in the recent ITU decisions could not be achieved. Of course, the assessment of that view belongs to the FCC, which will also receive and assess MITRE's measurements. DIRECTV and EchoStar view the independent testing as a scientific, empirical exercise of measuring interference as opposed to the policy exercise of developing standards.